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Fishery Cluster Project in the Russian Far East

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Report Highlights:

Russia ranks among the top ten countries in the world as regards to its marine and inland capture fisheries. The Russian coastline is the 4th largest in the world with an exclusive economic zone of 7.6 million square kilometers (km). Russia is now pursuing a policy of comprehensive re-organization of its fishery sector from resources management to processing and distribution. The establishment of a new fish processing cluster in Primorsky krai is stipulated in the list of orders of President Vladimir dated March 21, 2013.

General Information:

Russia ranks among the top ten countries in the world as regards to its marine and inland capture fisheries. The Russian coastline is the 4th largest in the world with an exclusive economic zone of 7.6 million square kilometers (km). Russia is now pursuing a policy of comprehensive reorganization of its fishery sector from resources management to processing and distribution. The establishment of a new fish processing cluster in Primorsky krai is stipulated in the list of orders of President Vladimir dated March 21, 2013.

General Overview

The fishing industry continues to play a major role in the economies of the following coastal territories of the Russian Far East (RFE): Primorsky, Khabarovsky and Kamchatsky krais, Sakhalinskaya and Magadanskaya Oblasts, and Chukotka and Koryak Autonomous Okrugs. Fish, sea invertebrates, and seaweed are the major export items for ports of Magadan, Kamchatka, Primorye (Primorskiy krai) and Sakhalin. The RFE fishery sector provides roughly 80 percent of the Russia's overall aquatic resources catch and more than 60 percent of the overall fish processing in the country. In 2013, the fish harvest in the RFE basin exceeded 2.9 million metric tons (MT). Processed seafood equaled 2.2 million MT. According to statistics of the VIII International Fish Congress that took place in Vladivostok in 2013, in 2012 the fish and seafood exports from the RFE equaled 1.2 billion MT valued at US \$1.89 billion; and according to the President of the Primorye Association of Fishery Enterprises the statistics is almost the same for 2103. Raw and frozen fish with minimum processing equals 70 percent of overall RFE's export while fish fillet composes only 1 percent. *Source: 8th International Fish Congress, Vladivostok, 2013.*

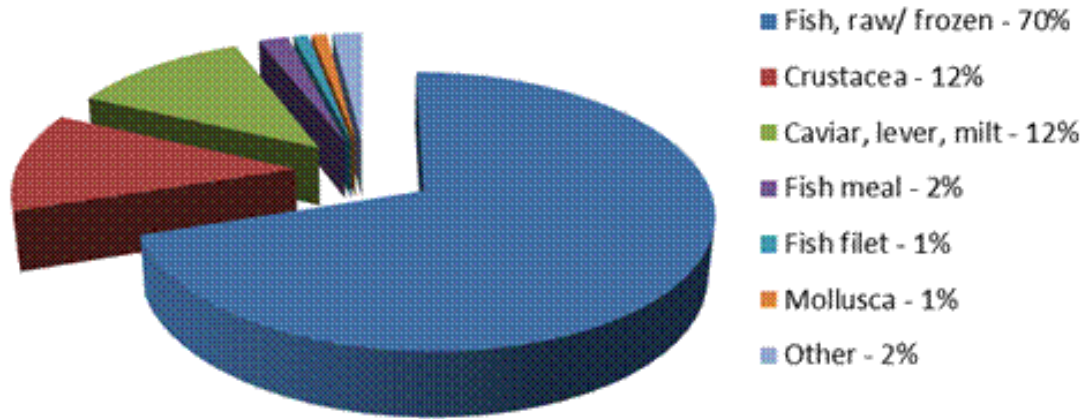
Table 1. Russia: 2013 RFE Fish Export Destinations:

Country	Volume of fish export, in %
Republic of Korea	45.2
China	30.6
Japan	12.9
Other countries	11.3

Source: Primorye Association Fisheries Enterprises

Graph 1. Russia: 2012 RFE Fish and Seafood Exports by Type, in %

RFE Aqua Resources Export Structure in 2012



Source: 8th International Fishery Congress, 2013

The fish and seafood sector in the RFE has been slow to develop over the last decade. There has been no significant change in the year-on-year amount of fish and seafood caught or processed due, primarily, to inefficient harvesting and an obsolete fleet. The Federal Fishery Agency of Primorsky krai stated that in 2013 the total official catch in the RFE amounted to 2.8 billion MT, slightly lower than in 2012. In 2013 the pollock catch totaled 1, 5 billion MT, also slightly lower than the previous year. Pacific salmon catch volume fell significantly in 2013 which can be attributed to the fact that salmon largely did not migrate as expected to the traditional places in the Russian Far East but a greater amount went to Alaska. A decrease in harvest can also be explained by inefficient harvesting equipment, a big percent of loss and outdated fleet. However, due to proximity to the Russia's richest natural fishing grounds fish and seafood traditionally remain the most important and demanded component of the food intake for the RFE population: locales buy fish not only in the local supermarkets, but also get it from individual traders in the open air markets and go into amateur fishing for some species, such as chum salmon, smelt, herring, flounder, navaga, etc.

The 8th International Fishery Congress held in 2013 forecasts demand for fish and seafood products in the RFE to grow from 22 kilogram per capita in 2012 up to 28 kilogram per capita by 2020. At the same time, insufficient fish and seafood products caught in Russian waters finds their way to the local markets in the RFE. This happens for a number of reasons: 1) fishermen prefer to sell their catch directly at sea without reporting to officials; 2) obsolete fish processing technologies and equipment in the RFE; 3) due to cheap labor, fish processing in China is more profitable for local fishing companies. Once processed in China, the final product is shipped back to the RFE market at high prices. Domestic fish processing plants are not, in general, capable of provide the high quality final products due to outdated technologies and equipment. Local supermarkets in RFE cities sell mainly frozen (filleted) Pollock, cod, halibut, salmon, smelt, and flounder.

Challenges that the RFE Fish and Seafood Sector Encounters

Russian Prime Minister Dmitry Medvedev expressed concerns about the current situation in the Russian

fish and seafood sector during recent meetings to discuss the “State Program on the Fishery Industry Development”. Mr. Medvedev highlighted the following areas of concern that must be dealt with:

- protection and restoration of fish and aquatic invertebrates;
- environmentally friendly fishing;
- processing fish into value-added products;
- improving legislation on fishing;
- thwarting fish piracy and illegal trade of fish.

Table 2. Russia: Challenges Fishing Sector Faced in RFE

Challenges	Detailed description
Inadequate processing capabilities	A large amount of manual labor, outdated equipment
Inefficient production technologies	Federal Service for Oversight of Consumer Protection and Welfare assess 5 percent of processed fish as not meeting hygienic requirements and may be unsafe for consumers; 6-7 percent of imported processed fish have glaze icing exceeding Russian standards; deviations from storage and temperature regimes are found in 10 percent of processed fish; incorrect markings, misstatement of weight, are frequent; approximately 15 percent of fish products in the Russian market do not comply with sanitary regulations - this equals to half a million tons valued at \$2 billion
Obsolete fleet	Its wear and tear is almost 80 percent
Shortage of shore-based infrastructure	Underdeveloped fish ports, accumulative storage refrigerators, processing plants, delays in delivery of raw fish to processing/ storage facilities, trading platforms, distribution networks
Ineffective management to meet the standards of credible sustainability	Inefficient harvesting/ breeding technologies, inefficient storage technologies, a lot of waste leading to financial losses; 80-90 percent of local fishing companies are managed from offshore.
Barriers for foreign investors and partners	Lack of transparency at different administrative levels
High taxes and customs tariffs	In addition to the fee for natural resources extraction a fishing company has to pay a rent in the amount of 15 percent of the fee.
Encumbering administrative barriers, which hamper the efficiency of the industry	There are 32 controlling authorities and 511 permission documents to regulate Russian fishery industry; increased number of permission documents doesn't result with a higher quality
Lack or shortage of fish products' marketing and sales centers	Lack of fish products exchange, trading sites, marketing/ sales centers, distribution network
Lack of fish industry core	Fish industry knowledge, ties, relationships, resources, raw materials and specialized services founded on unique characteristics of the local region – support strong levels of cooperation among

	competing firms and enable a network of related companies to improve their productivity and innovations for global competition.
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Source: Records of meeting of the Government Commission on Agriculture and Fisheries development; VIII International Fishery Congress, 2013

The last decade has been dedicated to reconstruction of the Russian fishing industry to improve its transparency and effectiveness, as the sector has always been a challenge to manage and legislate (*Source: World Fishing Magazine*). Russian Minister of Agriculture Nikolai Fyodorov stated that “The Russian fishing industry is dominated by the tactics of survival rather than a strategy of development.”

Many market analysts agree with this statement. Overall, fishing in RFE’s exclusive economic zone remains a source of enormously profitable poaching, as the catch often does not hit the shore or pass through customs control and is reloaded to foreign vessels straight at sea. Russia still has limited means of accounting for or controlling the amount of fish caught in its exclusive economic zone. The mechanisms for space monitoring of a fishing vessel’s displacement work ineffectively. Widespread poaching damages the domestic market and affects the price of many fish and seafood products on the world market. The Russian government informed that 20 percent of crab and 18% of urchin roe sold to Japan in 2011 were extracted by poachers (*Source: World Fishing Magazine*).

Russia has asked Asia Pacific nations to sign agreements to prevent poaching and smuggling of illegal catches. Such agreements were signed with the Republic of Korea in 2012 at the Asia-Pacific Economic Cooperation (APEC) forum in Vladivostok. Japan signed such an agreement that says that only crab that has passed through proper procedures can be exported to Japan. Negotiations are continuing with China. The obligatory crossing of the 12-mile zone in the Russian Far East involves border procedures that hinder the work of fishermen and may induce fishing companies to transship the unregistered catch to foreign vessels at sea, according to market analysts as stated in the World Fishing Magazine in 2013.

Andrey Krainiy, Former Head of the Federal Fishery Agency, recently proposed amendments to be entered to Russian Resolution #560 dated September 05, 2007 titled, “On obtaining the permission to numerous crossing of the State border of the Russian Federation of Russian fishing vessels engaged in fishing of aquatic biological resources in the internal sea waters, territorial sea, exclusive economic zone or on the continental shelf of the Russian Federation, and on the implementation of the monitoring in respect of these fishing vessels. Mr. Krainiy pushed to introduce notification-based crossing of the 12-mile zone (rather than permit-based) to facilitate and speed-up crossing the state border. Market analysts have stated that this amendment would provide the domestic coastal fish processing facilities with additional 50-55 thousand MT of raw fish and value in the amount of about US \$99 million.

The fishery industry in the RFE includes not only fishing but also aquaculture, fleet, ports, warehouses and refrigerating and processing facilities, processing technologies and plants, marketing and logistics. The federal program titled, “Development of the Russian Fishery Industrial Complex from 2013-20” (Decree #315-P adopted on March 7, 2013) defines the aims, goals and main directions of the development of the fishing industry as well as the mechanisms and efficiency indicators. The Program is aimed at the fishing industry’s transition from reliance on raw material exports to preservation, reproduction and rational use of aquatic bio resources, the introduction of new forms of technology, and ensuring the global competitiveness of goods and services produced.

On July 4, 2013, Russian President Vladimir Putin signed the Federal Law on aquaculture (fish farming) with amendments to certain legislative acts of the Russian Federation. It has been several years since the Russian fishery industry has been waiting for the adoption of the law. There are about 60 hatcheries and fish farms in the RFE, which cultivate high value fish and seafood products for export to Japan, South Korea, and China. The presence of natural and artificial reservoirs and the abundant coastal bays and inlets in the RFE, offer a strong opportunity for developing various hatchery and fish farm businesses. Sea farming in the RFE could potentially produce up to 3.6 million MT of seafood, according to estimates of the Far Eastern University of Fishing Industry. The new Law aims at improvement of the legislation in terms of developing fish breeding farms through the provision of land and water usage; preserving domestic marine biological resources; processing value-added fish products on domestic coastal facilities. The Law is expected to come into effect in the first quarter of 2014.

Establishment of a fish processing cluster in Primorsky krai is stipulated in the list of orders of President of the Russian Federation regarding fishery industry development dated March 21, 2013 # Пп-613, Article 3:

- About creation of the RFE fish processing cluster with a modern port infrastructure and refrigerating capacities;
- About creation of auction platforms on realization of the Russian water resources in the internal and external markets;
- About elimination of administrative barriers for delivery of water resources to the Russian coast and, at necessity, acceptance of corresponding regulations.

Following the President Putin's order, in 2013 Deputy Prime Minister Arkady Dvorkovich chaired several meetings of the Government Commission on Agriculture and Fisheries to discuss how to develop the fish processing cluster project. Primorsky krai has a sufficient resource base, developed fishing industry, logistics, infrastructure, largest in the RFE ice-free ports, railway hubs and direct access to the Trans-Siberian Railway. Among other cluster-related issues, the Commission had to elaborate co-financing from the Federal and regional budgets, attract private investment sources and include Primorsky krai fish processing cluster into the GOR Federal Program "Social and Economic Development of the Far East and Baikal regions to 2018". Changing framework conditions introduced by legal incentives and market developments are likely to bring more investments into the industry.

At the regional level, the Primorsky krai administration developed and approved a "Program of Social and Economic Development of Primorsky krai for 2013-2017", which includes: sub-program "Development of fish industry complex in Primorsky krai for 2013-2017", sub-program "Development of the market of fish products" (paragraph 2.1 "Development and realization of the pilot project of fish processing cluster", paragraph 2.2 "Development and realization of the pilot project of an auction trading platform). In the RFE with its neighborhood of densely populated Pacific Rim countries the project is expected to outpace the national level.

The International Fishery Congress held in Vladivostok on an annual basis since 2004 brings together officials from the Russian Federal Ministries of Economic Development, Agriculture, and Transport, Russian Federal Fishery Agency, Federal Agency on Ecology, State Duma of the Russian Federation, Border Guard, Federal Security Service, Customs Committee, RFE territories' Governors, Primorye Association Fisheries Enterprises and directors of the RFE fishing/fish processing companies, as well as businessmen and associations from the United States, Canada, Japan, South Korea, China, Germany, Norway, Iceland, and New Zealand. At the 2013 session, the Congress participants discussed cluster mechanism as means for sustainable development of fishery industry in the RFE. Vladimir

Miklushevsky, Governor of the Primorsky krai, encouraged participants to become investors of the fish processing cluster project development. Similar discussions with potential cluster investors went on at the annual plenary session at the Far Eastern Investment Congress held in September 2013 (www.vestiregion.ru).

Description of Fish Processing Cluster in the RFE

Primorsky krai was selected as the cluster core for the following parameters:

- Advantageous Resource Base: Geographic location in the proximity to the overpopulated consumer markets of North-East Asian countries, largest in the RFE ice-free ports, railway hubs and direct access to the Trans-Siberian Railway, best raw stock characterized by non-distant disposition of main fishing grounds from ports, region's specialization in fishing, availability of human resources, research and education institutions, fleet base and processing enterprises.
- Domestic Market Needs in healthy and high quality processed fish and seafood.

Table 3. Russia: 2013 RFE Basin Catch in % of Total Aquatic Resources Harvest

Species	Catch, in %
Herring	40
Mollusks	60
Algae	90
Flatfish	90
Salmon	99
Crab	100

Source: 8th International Fishery Congress, 2013

It is expected that development of the fish processing cluster in Primorsky krai will:

- successfully compete with fish processors in China and Republic of Korea;
- improve fish processing on the domestic shore, manufacture value-added fish products, apply waste-free processing technologies, create consumer confidence;
- create a wholesome competition as a driving force behind sustainable economic growth;
- avoid infrastructural limitations, develop logistics, build roads and access ways;
- develop modern fishery ports;
- renovate refrigerating and warehousing facilities;
- ensure transparency of aquatic bio resources auctions, create a fish stock exchanges to control prices for fishery products;
- ensure investment climate, decrease cost of market entry, create favorable fiscal (taxation and customs) conditions;
- develop processed fish marketing and sales centers, keep competitive prices for fish products;
- improve management, overpass administrative barriers;
- diversify economy, improve business reputation;
- repair and modernize fishing vessels.

Source: Records of Meeting of the Government Commission on Agriculture and Fisheries Development; 8th International Fishery Congress 2013

Cluster Structure

S.A. Rosenfeld (Regional Technology Strategies, USA) defines a cluster as a geographically bounded agglomeration of interconnected firms that together are able to achieve synergy.

As a regular cluster, the RFE fish processing cluster should consist of four key elements – 1) core firms, 2) supporting firms, 3) social infrastructure and 4) hard infrastructure. Core is a set of highly specialized and interconnected firms that display unique characteristics of the local region – fishing, fish processing and aquaculture companies. (Sources: Stuart A. Rosenfeld, *Regional Technology Strategies*, Carrboro, North Carolina, USA; *The University of Auckland Business Review*). Supporting firms involve related industry specialists with functional activities, such as banks, accountants, lawyers, designers, supplier firms, or secondary activities that add value to the core firms, understand their technologies and markets: research institutes, such as Pacific Research Fisheries Center (TINRO-Center), marine engineering, consultants, who can solve specific problems and give innovations, marketing, distribution and advertising companies, which know their customers. Social (or soft) infrastructure - public and private partnerships: Federal and local government, such as Federal Service on Consumer's rights Protection and Human Well-being Surveillance (Rosselkhoz nadzor), Far East Development Ministry (Minvostokrazvitiya), educational institutions, such as Far Eastern State Technical Fisheries University, which assist the core firms with skilled labor, professional and industry associations, such as Primorye Association Fisheries Enterprises, Far Eastern Crab Catchers Association, Association of Developers, Manufacturers and Suppliers of Fish Processing Complexes and Equipment. Their function is to facilitate coordination of the core and supporting firms, which would remain fragmented without social infrastructure. Hard infrastructure includes facilities that assist with energy requirements, transportation and communication: fishery ports, hubs, roads, railways, such as Trans-Siberian Railway, storage and processing facilities. Hard infrastructure is essential if cluster outputs go to domestic/ international market. Upgrade/ development and effective functioning of hard infrastructure is critical to the cluster.

The Primorskiy krai fish processing cluster is expected to employ a significant number of people in the coastal territories and, when managed effectively, influence adjacent regions and industry complementarities. Fish processing cluster will offer the RFE a sustainable economic growth, add value to the processed product by means of collaborative strategies of various industry sectors, become a significant source for regional exports, provide a positive impact on the region's wages, quality jobs and in the long last impact on human health and welfare. A similar Federal Program recently adopted in Sakhalinskaya Oblast provided local fishermen with additional \$10.4 billion in 2013. Diversification of the Primorsky krai economy will make the region more attractive for international investors and exporters of state-of-the-art technologies and equipment.

Several areas for the cluster construction were reviewed, and two options chosen - a site near the village of Slavyanka in Khasansky area, and Cape Grape in Shkotovsky area, both in the Southern Primorye. But the decision as to where to build the complex is still pending. Governor Vladimir Miklushevskiy declared that the complex to be built in the Southern Primorye, will include construction of:

- a harbor for marine refrigerator fleet with various deadweight;
- a dock with modern unloading complex;
- accumulative refrigeration and storage facilities with storage capacity of 200 thousand tons;
- first stage of fish processing complex with an overall annual capacity of 1 million MT/year (a second stage should increase capacity twofold) including a) a plant with production capacity of 200 MT/day; b) a plant for fish-based baby food production; c) a plant to process waste (cod-liver oil, fish meal);
- modern port and transport infrastructure, logistics and trading/shopping centers.

Investment Opportunities

Governor Vladimir Miklushevskiy stated that growth rate of the economy of Primorskiy krai is 5.1 percent, significantly higher than the overall Russian average. This makes the region attractive in terms of doing business and investments. Fish processing cluster construction is estimated at \$1.2 billion; 60 percent of this amount is expected to get from private investors, the other 40 percent from Federal and regional budgets. By 2016, an \$800 million fish processing complex is expected to be built in Primorsky krai for Russian Pollack processing. In addition to processing capacities, the largest RFE's complex will also specialize on port and trade activities. The fish processing cluster will be located on an area of 120 hectares. According to analysts of Far Eastern Research Institute of Marine Fleet, the new complex will increase the fish turnover in Primorsky krai from the current \$676 million to \$1.8 billion by 2020. The major investments will be provided by GOR and regional government while the remaining is expected to be allocated from private sources. U.S. companies that have experience in any of the four key elements 1) core firms, 2) supporting firms, 3) social infrastructure and 4) hard infrastructure are invited as investors or partners to participate in the Fishery Cluster investment project in the RFE. Please visit Primorsky krai administration web-page: <http://primorsky.ru/>, investment projects: <http://invest.primorsky.ru/index.php/en/>

On December 24, 2013, the Primorskiy krai's Legislative Assembly passed a regional Law to offer tax privileges to major investors. The Law came into force on January 1, 2014.

http://voiceofrussia.com/news/2013_12_19/Russias-Far-East-to-offer-tax-privileges-to-big-investors-7471/ Companies offering investments projects that would create high-efficiency jobs will be exempt from income and property taxes for a period of the first five years. Tax privileges will be applicable to all new production facilities launched since January 1, 2013 on condition that investments in the Primorskiy krai's economy are at least \$4.5 million within three years or over \$15 million within five years. An investment project should be implemented in one of the top-priority economic areas, such as farming, fishing, mining or processing sector, chemical industry, electricity generation or distribution, etc.

Read more: Fish and Seafood Production and Trade Update

http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Fish%20and%20Seafood%20Production%20and%20Trade%20Update_Moscow_Russian%20Federation_6-11-2013.pdf